

3.4 JOHN DEERE ENGINE DETAILED DESCRIPTION OF THE VEHICLE MONITOR DISPLAY (All units with optional AST transmission have this vehicle monitor display, Cummins & Deere)

Gauges

The Vehicle Monitor Displays Water Temperature (°F) , Engine RPM, Oil Pressure (psi) (Top Row Left to Right, Battery Voltage, % of Fuel in Tank and Engine hours (Bottom Row Left to Right). When Ignition key is turned to ON position all lights will be lighted for a few seconds and then turn OFF.



The Vehicle Monitor will display the J1939 Code and a code description for the Operator and/or Technician to use evaluate engine problems. If only a numerical fault code is given, see Diagnostic Trouble Codes (DTC) listing.



Instrument Cluster



– Engine Fault Lamp



High Exhaust Gas Temperature



- Exhaust Filter



- Exhaust Regeneration – OFF



- Wait to Start



– Engine Alarm Lamp



- Exhaust Regeneration. -To request Regeneration – Hold 3 seconds.



- Inhibited Regeneration – Hold for 3 seconds. Light above will be light.



Repeat Hold for 3 seconds to cancel.



- MENU Button



- UP & DOWN BUTTONS



- ENTER BUTTON

This vehicle is equipped with a John Deere Tier 4 Final Engine that has an Exhaust Regeneration System. The Instrument Cluster Display Condition of Diesel Particulate Filter (DPF). The DPF monitors Temperatures and Pressures on both side of the Filter and will command when the Engine must go into regeneration mode. This mode can be delayed but will need to be performed. If delayed long enough the Engine will go into automatic mode and will NOT allow the vehicle to function without going through the regeneration cycle. There can be a point where the vehicle will need to be serviced by a John Deere dealer before further operation of the vehicle.

There are 5 stages of Soot Levels.

Soot Level 0 – Natural Regeneration. No issues or lights ON at this Soot Level. No affects to vehicle operation.

Soot Level 1 -Automatic Cleaning. No affect to vehicle operation. ECU is managing the exhaust. Operator may see the



High Exhaust Gas Temperature light ON.



Soot Level 2 – Automatic Cleaning. Operator may see the High Exhaust Gas Temperature light ON. This is the same as Level 1 just a higher level of soot in the DPF.

Soot Level 3 – Automatic Cleaning. Engine is NOT derated. The ECU is managing the Exhaust and the Operator will see



Exhaust Filter Light and the High Exhaust Gas Temperature Light ON. The Stationary cleaning of the DPF is allowed but it is NOT mandatory but Stationary cleaning would be recommended. Push Exhaust Regeneration Button



, hold for 3 seconds. This will start the Exhaust Regeneration.



Soot Level 4 – 50% Derating of the Engine. Exhaust Filter Light will be flashing and Check Engine Light will be on. At this Stage the best practice would be to Park the vehicle and place in Stationary Cleaning mode by pushing




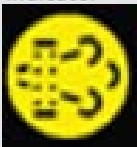



Exhaust Regeneration Button, hold for 3 seconds. This will start the Exhaust Regeneration.



Soot Level 5 - Exhaust Filter Light will be flashing. The Stop Engine Light will be ON. The Engine will be severely derated and will not have enough power to operate. When this Soot Level is obtained a John Deere Technician must be called to perform a Service Recovery on the Engine. This will need to be done before the vehicle can be operated.



See chart below for Exhaust Indicators with descriptions. (John Deere Chart)

Indicators	Description	Operator Action
Exhaust Filter Cleaning Indicator 	Active when: 1. Exhaust gas temperature is high. 2. Elevated idle is active. 3. Exhaust filter cleaning is in process.	Machine can be operated as normal. If operating in an area where high exhaust temperatures may be an issue, abort exhaust filter cleaning by using the disable feature.
Exhaust Filter Indicator 	Active when: Soot level in the exhaust filter indicates need for an exhaust filter cleaning. *DTC: 003719.15 will be present.	Enable auto filter cleaning to allow a cleaning cycle. OR Begin a manual / parked cleaning.
Exhaust Filter and Warning Indicators 	Active when: Machine performance is reduced due to moderately high soot level. *DTC: 003719.16 will be present.	Begin a manual / parked cleaning.
Exhaust Filter and Stop Indicators 	Active when: Exhaust filter requires service. Machine performance is reduced due to Extremely High soot level and a stop engine request is made. *DTC: 003719.00 will be present.	Service the exhaust filter. Contact your servicing dealer.
Auto Cleaning Disabled Indicator 	Active when: Auto exhaust filter cleaning is disabled.	If possible, enable auto cleaning.

*Diagnostic Trouble Codes (DTC).